

Appl. No. 10/526,326
Amdt. dated May 1, 2007
Reply to Office Action of February 1, 2007

PATENT

Amendments to the Drawings:

The attached sheet of drawings includes changes to Fig. 20. This sheet, which includes Fig. 20 replaces the original sheet including Fig. 20.

Attachment: Replacement Sheet
Annotated Sheet Showing Changes

REMARKS/ARGUMENTS

Status of the Claims

Upon entry of the present amendments, claims 1, 3-76 are pending. Claim 2 is canceled without disclaimer or prejudice to renewal. Claims 1, 5, 6, 8-35 and 37-76 are withdrawn as directed to a non-elected invention. Claims 2-4, 7 and 36 are under examination. Claims 1, 3, 4, 7, 17, 28, 31, 36, 43, 44 and 49 are amended.

Claim 1 is amended to incorporate the language of claim 2; to set forth a polypeptide having at least 95% sequence identity to SEQ ID NO:12; to set forth a cell proliferative biological activity; to clarify that the polynucleotide hybridizes to a complement strand; and to set forth specific hybridization conditions. Support for 95% sequence identity is found, for example, on page 49, lines 19-29 and on page 55, lines 6-15. Support for cell proliferative activity is found, for example, on page 25, line 27 through page 26, line 1 and at page 72, lines 12-20. Support for complement is found, for example on page 49, line 18 through page 50, line 1. Support for stringent hybridization conditions is found, for example, on page 53, lines 15-27.

Claims 17, 28, 31, 36, 43, 44 and 49 are amended to be commensurate in scope with claim 1.

No new matter is added by the present amendments and the Examiner is respectfully requested to enter them.

Request for Rejoinder

Claims 17-25, 28, 29, 31, 43-45, 49 are withdrawn from examination as being drawn to non-elected inventions. Claims 2-4, 7 and 36 and 17-25, 28, 29, 31, 43-45, 49 are related as compositions and methods of use. Upon entry of the present amendments, Applicants believe that composition claims 2-4, 7 and 36 are allowable. Accordingly, pursuant to M.P.E.P. § 821.04, Applicants respectfully request withdrawal of the restriction requirement with respect to composition claims 2-4, 7 and 36, and method claims 17-25, 28, 29, 31, 43-45, 49, and examination of the withdrawn methods of use claims. In accordance with M.P.E.P. § 821.04,

Applicants have amended claims 17-25, 28, 29, 31, 43-45, 49 such that their scope corresponds to claims 2-4, 7 and 36.

Unity of Invention

Applicants maintain their traversal of the restriction requirement with respect to the inventions of Group I and Group II. Applicants respectfully request that the Examiner rejoin the claims of Groups I and II, and examine them in a single application.

The Examiner alleges that Groups I and II lack unity of invention because the PNF1 protein in Peyman, *et al.*, is found to be structurally similar to the protein of SEQ ID NO:4. The Examiner alleges that claims 1(c) and 7 lack unity on the basis of Example 39 of the PCT International Search and Preliminary Examination Guidelines.

In response, SEQ ID NOs: 1-10 have been deleted from claim 1 and claim 1(c) has been amended to set forth a “complement of the nucleotide sequence.” Therefore, the amended claims set forth a technical feature that defines over the art and are in compliance with the PCT International Search and Preliminary Examination Guidelines.

Objections to the Drawings

The Examiner objected to Figure 20A because the two “Bromo” domains were incorrectly spelled as “Brono.” In response, Applicants submit with this response a corrected Figure 20A.

Objections to the Specification

The Examiner has objected to typographical errors on pages 13, 15 and 19, and requested that trademarks be capitalized. In response, Applicants have amended the specification to correct the typographical errors and capitalized references to trademarked goods.

Objections to the Claims

The Examiner has objected to claim 2 for referring to a non-elected claim. In response, Applicants have incorporated the language of claim 2 into claim 1 and canceled claim 2. Amended claim 1 is directed to the elected invention.

Rejection under 35 U.S.C. § 112, second paragraph

The Examiner has rejected claims 2-4 and 7 under 35 U.S.C. § 112, second paragraph, as allegedly unclear. In particular, the Examiner objects to the phrase “biological activity.” Applicants do not necessarily agree with the Examiner. However, in the interest of furthering prosecution, Applicants have amended claim 1 to set forth “cell proliferative activity.” Accordingly, the Examiner is respectfully requested to withdraw this rejection.

Rejection under 35 U.S.C. § 112, first paragraph, enablement requirement

The Examiner has rejected claims 2-4 and 7 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. In particular, the Examiner alleges that the specification does not reasonably provide enablement for substitutions, deletions, insertions or additions to the sequences. *See*, page 6 of the present Office Action.

Applicants do not necessarily agree with the Examiner. However, in the interest of furthering prosecution, Applicants have amended claim 1(b) to set forth a polynucleotide encoding a CGX 2 polypeptide that has at least 95% identity to SEQ ID NO:12, and claim 1(c) to set forth specific stringent hybridization conditions.

With respect to claim 1(b), Applicants specification teaches those of skill how to make and use a polynucleotide encoding a CGX 2 polypeptide that has at least 95% identity to SEQ ID NO:12. On page 8, lines 16-27, the specification teaches that an NFXL1 polypeptide can include SEQ ID NO:12 and teaches the particular identified domains within the NFXL1 polypeptide. *See also*, page 15, line 22, wherein the specification correlates a NFXL1 polypeptide with a CGX 2 polypeptide. Moreover, CGX variants are taught on page 51, line 15 through page 54, line 17. Conservative mutations of CGX proteins and nucleic acids are taught on page 54, line 20 through page 56, line 16. The specification teaches that amino acids

conserved amongst CGX proteins are less amenable to mutation. *See*, page 54, line 32 through page 55, line 5. Also, methods of introducing mutations into amino acid sequences is taught at page 56, line 21 through page 57, line 7. The specification teaches that biologically active CGX polypeptides can contain an ATP-binding domain, and that CGX activity can be assayed using assays well known in the art (*e.g.*, proliferation assays to test cell proliferative activity). *See*, page 51, lines 3-13.

With respect to claim 1(c), hybridization techniques were well known in the art at the time of filing August 2002 priority date of the application. Furthermore, Applicants have amended claim 1 to set forth the specific hybridization conditions used. Stringent hybridization conditions and references indicative of the state of the art are found, for example, on page 52, line 32 through page 53, line 27 of the present specification.

In view of the foregoing, Applicants have taught those of skill in the art how to make and use the claimed polynucleotides with a reasonable expectation of success and without undue experimentation. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

Rejection under 35 U.S.C. § 101

The Examiner has rejected claim 7 under 35 U.S.C. § 101, as allegedly drawn to non-statutory subject matter. The Examiner is thanked for stating that amendment of claim 7 to set forth “an isolated” polynucleotide would obviate this rejection. Applicants do not necessarily agree with the Examiner. However, in the interest of furthering prosecution, Applicants have amended claim 7 to set forth that the polynucleotide is isolated. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

Rejection under 35 U.S.C. § 102(a,e) in view of PCT Publ. WO 02/22660

The Examiner has rejected claims 2-4, 7 and 36 under 35 U.S.C. § 102(a,e) as allegedly anticipated by PCT Publication No. WO 02/22660 (“Tang”).

Applicants do not necessarily agree with the Examiner. However, in the interest of furthering prosecution, Applicants have amended the claims to delete reference to SEQ ID

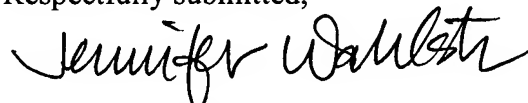
NO:4. The Examiner concedes that SEQ ID NOs 11 and 12 are free of art. *See*, page 3 of the present Office Action. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

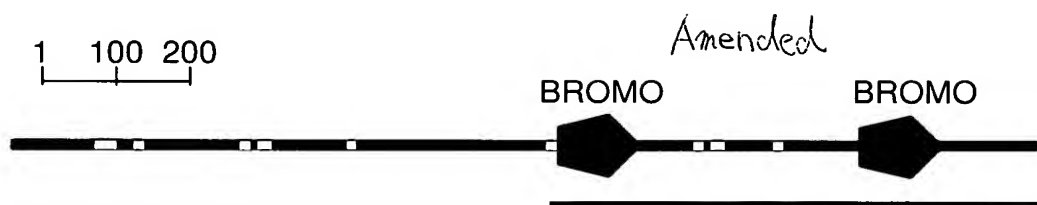
Respectfully submitted,



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Attachments
JLW:jlw
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Fig. 20

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pAS2-C20orf20

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pACT2- BRD8

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**C**

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